

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

		Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	
		Date	02-Nov-13	03-Nov-13	04-Nov-13	05-Nov-13	06-Nov-13	07-Nov-13	08-Nov-13	09-Nov-13	
Method Type	Chemical	Unit	MDL								
Aggregate Organics	Hydrocarbons, Recoverable (I.R.)	mg/L	1	-	-	<1	<1	<1	<1 - 6.1	<1	
	BOD	mg/L	2	<2	2.2	<2	<2	<2	2.3 - 3.5	<2	
	Oil and Grease	mg/L	1	<1	1.3	-	-	-	-	-	
	Phenols (4AAP)	µg/L	1	<1	1.3	<1 - 1.3	1.3 - 1.8	<1	<1 - 1.2	<1	
Anions and Nutrients	Alkalinity (T) as CaCO3	mg/L	2	119	-	118	117 - 124	129 - 130	134	132	
	Ammonia	mg/L	0.05	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	
	Bicarbonate	mg/L	5	146	-	144	143 - 152	157 - 159	163 - 164	161 - 162	
	Carbonate	mg/L	5	<5	-	<5	<5	<5	<5	<5	
	Chloride	mg/L	0.5	2.77	-	2.86	3.07 - 3.82	3.8 - 3.86	4.62 - 4.73	4.34 - 4.87	4.09
	Electrical Conductivity (lab)	µS/m	0.0002	0.38	-	0.382	0.378 - 0.398	0.406 - 0.409	0.415 - 0.417	0.407 - 0.415	0.404
	Hydroxide	mg/L	5	<5	-	<5	<5	<5	<5	<5	
	Ionic Balance	%		97.8	-	101	99.9 - 102	97.2 - 99.1	95 - 96.9	94.9 - 97.7	97.6
	Kjeldahl Nitrogen Total	mg/L	0.2	0.31	-	<0.2	<0.2	<0.2	<0.2	<0.2	
	Nitrate (as N)	mg/L	0.05	0.074	-	<0.05	<0.05 - 0.064	0.055 - 0.057	<0.05	0.068 - 0.072	0.067
	Nitrate + Nitrite-N	mg/L	0.07	-	-	<0.071	<0.071	<0.071	<0.071	<0.071 - 0.072	<0.071
	Nitrite (as N)	mg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	
	pH (Lab)	pH	0.1	8.03	-	7.97	8 - 8.09	7.99 - 8.09	8.01 - 8.02	7.81 - 7.94	7.94
	Phosphorus	mg/L	0.001	0.052	-	<0.02	0.009 - 0.0133	0.0088 - 0.0203	0.0098 - 0.0118	0.0102 - 0.0198	0.0093
	Phosphorus (Filtered)	mg/L	0.001	-	-	-	0.0019 - 0.0036	0.0021 - 0.0023	<0.001	0.0013 - 0.0019	0.0029
	Sulphate	mg/L	0.5	74.1	-	72.6	74.7 - 77.8	77.3 - 77.9	75.4 - 76.8	81.9 - 85.4	79.1
	Sulphide	mg/L	0.002	<0.002	-	0.002	0.0021 - 0.0032	0.0024 - 0.0037	0.0033 - 0.0035	<0.002 - 0.003	<0.002
	Hardness as CaCO3	mg/L		178	-	181	184 - 191	188 - 191	184 - 186	193 - 196	190
	TDS	mg/L		219	-	218	223 - 232	235 - 236	237 - 238	246 - 247	238
Cyanides	Cyanide Total	mg/L	0.002	<0.002	-	<0.002	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals	Aluminium (Filtered)	mg/L	0.001	0.0179	-	0.014	0.0099 - 0.0119	0.012 - 0.0121	0.0124 - 0.0125	0.0106 - 0.012	0.0088
	Antimony (Filtered)	mg/L	0.0001	<0.0005	-	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Arsenic (Filtered)	mg/L	0.0001	<0.0005	-	<0.0004	<0.0001 - 0.00011	0.00012	0.00013	0.00015 - 0.00016	0.00014
	Barium (Filtered)	mg/L	0.00005	0.0592	-	0.0552	0.0529 - 0.0564	0.0568 - 0.0587	0.0605 - 0.0647	0.0616 - 0.0653	0.0609
	Beryllium (Filtered)	mg/L	0.0005	<0.0025	-	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Bismuth (Filtered)	mg/L	0.00005	<0.00025	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext) (Filtered)	mg/L	0.01	<0.05	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
	Cadmium (Filtered)	mg/L	0.00001	<0.00005	-	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Calcium (Filtered)	mg/L	0.02	45.6	-	48.4	49.1 - 51.5	49.1 - 49.7	49.5 - 49.9	51.4 - 52.1	50.7
	Chromium (III+VI) (Filtered)	mg/L	0.0001	<0.0005	-	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Cobalt (Filtered)	mg/L	0.0001	<0.0005	-	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Copper (Filtered)	mg/L	0.0001	<0.0005	-	<0.001	<0.0001 - 0.00012	0.00013 - 0.00016	0.00013 - 0.00017	0.00011 - 0.00017	0.00018
	Iron (Filtered)	mg/L	0.01	<0.05	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Lead (Filtered)	mg/L	0.00005	<0.00025	-	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Lithium (Filtered)	mg/L	0.003	<0.015	-	<0.003	0.0033 - 0.0036	0.0034	<0.003 - 0.0033	0.0032 - 0.0034	<0.003
	Magnesium (Filtered)	mg/L	0.005	15.5	-	14.5	15 - 15.2	15.8 - 16.2	14.6 - 15	15.6 - 16	15.4
	Manganese (Filtered)	mg/L	0.00005	0.0114	-	0.008	0.00927 - 0.0112	0.0118 - 0.0119	0.0156 - 0.0166	0.0147 - 0.0152	0.0126
	Molybdenum (Filtered)	mg/L	0.00005	0.00098	-	<0.005	0.000926 - 0.000955	0.000977 - 0.000993	0.000972 - 0.00102	0.00104 - 0.00108	0.00106
	Nickel (Filtered)	mg/L	0.0001	0.00052	-	<0.002	0.00022 - 0.00023	0.00025 - 0.00029	0.00027 - 0.00028	0.00028 - 0.00029	0.00029
	Phosphorus (Filtered)	mg/L	0.3	<1.5	-	-	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium (Filtered)	mg/L	0.05	0.67	-	0.66	0.671 - 0.676	0.773 - 0.774	0.82	0.73 - 0.78	0.8
	Selenium (Filtered)	mg/L	0.0001	<0.0005	-	<0.0004	0.00035 - 0.00036	0.00033	0.00038	0.00035 - 0.00043	0.00029
	Silicon (Filtered)	µg/L	50	1750	-	-	2020 - 2030	1570 - 1580	1590 - 1670	1820 - 1850	1770
	Silver (Filtered)	mg/L	0.00001	<0.00005	-	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium (Filtered)	mg/L	0.05	8.2	-	8.3	8.44 - 8.97	10	11.3 - 11.6	10.1 - 10.9	10
	Strontium (Filtered)	mg/L	0.0001	0.519	-	-	0.553 - 0.562	0.537 - 0.557	0.542 - 0.565	0.568 - 0.576	0.572
	Thallium (Filtered)	mg/L	0.00005	<0.00025	-	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin (Filtered)	mg/L	0.0001	<0.0005	-	<0.05	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Titanium (Filtered)	mg/L	0.0003	<0.0015	-	<0.001	<0.0003	<0.0003	<0.0003	<0.0003 - 0.00033	<0.0003
	Uranium (Filtered)	µg/L	0.01	0.643	-	0.57	0.564 - 0.583	0.584 - 0.59	0.634 - 0.639	0.64 - 0.654	0.623
	Vanadium (Filtered)	mg/L	0.0001	<0.0005	-	<0.001	<0.0001	0.00011	0.00013	0.00013 - 0.00015	0.00011
Zinc (Filtered)	mg/L	0.001	0.0123	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	
Field	Turbidity	NTU		46.6	10.55	8.87	-	-	-	-	
Organic / Inorganic Carbon	Carbon	mg/L	1	-	-	-	2.2 - 2.3	2.6 - 2.8	3.1 - 3.2	2.1 - 2.9	1.5
	Dissolved Organic Carbon (Filtered)	mg/L	1	-	-	-	2.4 - 2.5	2.5 - 2.6	3.1 - 3.2	2.3 - 3	1.7
Organic Parameters	Acrylamide	µg/L	5	-	-	-	-	<5	<5	-	
	Naphthenic Acid	mg/L	1	-	-	-	<1	<1	<1	<1	

Notes
MDL - Method Detection Limit
- "Sample not analyzed for this parameter"
< - "result is less than the MDL. No detectable concentration was measured"
* EPA 245.7/245.1

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TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

Method Type	Chemical	Unit	MDL	Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1
				Date	02-Nov-13	03-Nov-13	04-Nov-13	05-Nov-13	06-Nov-13	07-Nov-13	08-Nov-13	09-Nov-13
Physical Tests	Dissolved Oxygen (Filtered)	mg/L	0.5	-	-	-	25.3	-	-	-	-	-
	TDS (Filtered)	mg/L	10	-	-	-	-	235 - 255	239 - 244	256 - 258	256 - 263	251
	Total Suspended Solids	mg/L	3	160	-	-	<3	<3 - 3	3 - 21	<3 - 10	7 - 53	<3
	Turbidity	NTU	0.1	63.2	-	-	5.71	4.46 - 5.2	6.03 - 8.6	6.77 - 7.57	6.98 - 20.6	6.01
Polycyclic Aromatic Hydrocarbons	Benzo[+]fluoranthene	mg/L	0.00001	-	-	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	C4 Benzantracenes/Chrysenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Dibenzothiophenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Naphthalenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	1,1-Biphenyl	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	1-Methylnaphthalene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	2-methylnaphthalene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	0.011
	Acenaphthene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Acenaphthylene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Anthracene	ug/L	0.01	-	-	-	-	0.029 - 0.051	<0.01 - 0.054	<0.04	<0.04	<0.04
	Benz(a)anthracene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(a) pyrene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Acridine	mg/L	0.00001	-	-	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Benzo(e)pyrene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(g,h,i)perylene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(k)fluoranthene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	C1 Acenaphthenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	Chrysene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	C1 Biphenyls	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Dibenzothiophenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	-	-	-
	C1 Fluorenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	-	-	-
	Dibenz(a,h)anthracene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Dibenzothiophene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Fluoranthene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Fluorene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Indeno(1,2,3-c,d)pyrene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Naphthalene	ug/L	0.05	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
	Perylene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Phenanthrene	ug/L	0.01	-	-	-	-	<0.01 - 0.01	<0.01	<0.01	<0.01	0.014
	Pyrene	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.04	<0.04	<0.04
	Quinoline	ug/L	0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
	Retene	ug/L	0.01	-	-	-	-	<0.01	<0.01 - 0.014	<0.01 - 0.024	<0.01 - 0.049	<0.01
	C2 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Biphenyls	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Dibenzothiophenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Naphthalenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Fluorenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Benzantracenes/Chrysenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
C3 Dibenzothiophenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Fluorenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Naphthalenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	
Total Metals	Aluminium	mg/L	0.003	1.51	-	-	0.181	0.094 - 0.159	0.119 - 0.171	0.174 - 0.229	0.11 - 0.355	0.164
	Antimony	mg/L	0.0001	<0.0005	-	-	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Arsenic	mg/L	0.0001	0.0009	-	-	<0.0004	0.00012 - 0.00016	0.00017 - 0.00018	0.00019 - 0.00021	0.00017 - 0.00042	0.0002
	Barium	mg/L	0.00005	0.158	-	-	0.0594	0.0545 - 0.0613	0.0601 - 0.0645	0.0629 - 0.0657	0.062 - 0.0883	0.0605
	Beryllium	mg/L	0.0005	<0.0025	-	-	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Notes

MDL - Method Detection Limit

- "Sample not analyzed for this parameter"

< - "result is less than the MDL. No detectable concentration was measured"

* EPA 245.7/245.1

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			Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1
			Date	02-Nov-13	03-Nov-13	04-Nov-13	05-Nov-13	06-Nov-13	07-Nov-13	08-Nov-13	09-Nov-13
Method Type	Chemical	Unit	MDL								
	Bismuth	mg/L	0.0005	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Boron (hot water ext)	mg/L	0.01	<0.05	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
	Cadmium	mg/L	0.0001	<0.0005	-	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Calcium	mg/L	0.02	44.8	-	49.7	48.5 - 51.9	48 - 50.1	51.1 - 51.6	50.1 - 50.5	50
	Chromium (III+VI)	mg/L	0.0001	<0.005	-	<0.005	0.00017 - 0.00021	0.00024 - 0.00036	0.00025	0.00016 - 0.00071	0.00038
	Cobalt	mg/L	0.0001	<0.002	-	<0.002	<0.0001	0.0001	0.00012	0.00011 - 0.00032	0.00011
	Copper	mg/L	0.0001	0.0029	-	<0.001	0.00026 - 0.00028	0.00029 - 0.00052	0.00048	0.0003 - 0.00109	0.0003
	Iron	mg/L	0.01	1.36	-	0.173	0.11 - 0.161	0.158 - 0.164	0.181 - 0.232	0.134 - 0.563	0.159
	Lead	mg/L	0.0005	0.00207	-	0.00014	0.00089 - 0.000138	0.000154 - 0.000157	0.000168 - 0.000219	0.000153 - 0.000768	0.000137
	Lithium	mg/L	0.005	<0.025	-	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
	Magnesium	mg/L	0.005	14.1	-	14.7	14.5 - 15	15.5 - 16	15 - 15.1	15 - 15.4	15.2
	Manganese	mg/L	0.0005	0.0363	-	0.0123	0.0128 - 0.0148	0.0156 - 0.0156	0.0214 - 0.0218	0.0196 - 0.0323	0.0159
	Mercury	ug/L	0.0005	<0.1*	-	<0.1*	<0.02 - 0.00073	<0.0015 - 0.0024	<0.0015 - 0.00089	0.00076 - 0.0019	0.00063
	Molybdenum	mg/L	0.0005	<0.005	-	<0.005	0.000964 - 0.001	0.000989 - 0.00104	0.00107 - 0.0011	0.000994 - 0.00107	0.00111
	Nickel	mg/L	0.0001	0.0023	-	<0.002	0.00035 - 0.00036	0.00037 - 0.00053	0.00049 - 0.00052	0.00035 - 0.0012	0.00042
	Phosphorus	mg/L	0.3	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium	mg/L	0.05	0.83	-	0.72	0.71 - 0.72	0.785 - 0.822	0.862 - 0.866	0.739 - 0.811	0.827
	Selenium	mg/L	0.0001	<0.0005	-	<0.0004	0.00032	0.00029 - 0.00033	0.00033	0.00034 - 0.00036	0.00033
	Silicon	ug/L	50	-	-	-	1910 - 1930	1710 - 1840	2010 - 2090	1870 - 2180	1970
	Silver	mg/L	0.0001	<0.0001	-	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium	mg/L	0.05	7.6	-	8.3	8.54 - 8.98	9.65 - 9.87	12.2 - 12.6	10.1 - 10.5	10.1
	Strontium	mg/L	0.0001	-	-	-	0.56 - 0.605	0.536 - 0.578	0.549	0.528 - 0.554	0.561
	Thallium	mg/L	0.0005	<0.00025	-	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin	mg/L	0.0001	<0.05	-	<0.05	<0.0001	<0.0001 - 0.00012	<0.0001	<0.0001	<0.0001
	Titanium	mg/L	0.0003	0.0504	-	0.0041	0.00195 - 0.00376	0.00247 - 0.00317	0.00483 - 0.00493	0.00264 - 0.0108	0.0042
	Uranium	ug/L	0.01	1.01	-	0.59	0.599 - 0.62	0.587 - 0.618	0.692 - 0.7	0.632 - 0.696	0.649
	Vanadium	mg/L	0.0001	0.002	-	<0.001	0.00036 - 0.00044	0.00042 - 0.00048	0.00051 - 0.00055	0.00036 - 0.00085	0.00045
	Zinc	mg/L	0.003	0.018	-	<0.004	<0.003	<0.003 - 0.0035	<0.003	<0.003 - 0.0099	<0.003
Volatile Organic Compounds	1,1,1-trichloroethane	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	1,1,2,2-tetrachloroethane	ug/L	20	-	-	-	<20	<20	<20	<20	<20
	1,1,2-trichloroethane	ug/L	2	-	-	-	<2	<2	<2	<2	<2
	1,1-dichloroethane	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	1,1-dichloroethene	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	1,2,3-trichloropropane	ug/L	5	-	-	-	<5	<5	<5	<5	<5
	1,2-dibromoethane	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	1,2-dichlorobenzene	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	1,2-dichloroethane	ug/L	2	-	-	-	<2	<2	<2	<2	<2
	1,2-dichloropropane	ug/L	2	-	-	-	<2	<2	<2	<2	<2
	1,3-dichlorobenzene	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	1,4-dichlorobenzene	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	Methyl Ethyl Ketone	ug/L	100	-	-	-	<100	<100	<100	<100	<100
	2-hexanone (MBK)	ug/L	10	-	-	-	<10	<10	<10	<10	<10
	4-Methyl-2-pentanone	ug/L	10	-	-	-	<10	<10	<10	<10	<10
	Acetone	mg/L	0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1
	Acrolein	ug/L	100	-	-	-	<100	<100	<100	<100	<100
	Acrylonitrile	ug/L	100	-	-	-	<100	<100	<100	<100	<100
	Benzene	mg/L	0.0005	<0.0005	-	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Toluene	mg/L	0.0005	<0.0005	-	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Bromodichloromethane	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	Bromoform	ug/L	3	-	-	-	<3	<3	<3	<3	<3
	Bromomethane	ug/L	10	-	-	-	<10	<10	<10	<10	<10
	Carbon disulfide	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	Carbon tetrachloride	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	Chlorobenzene	ug/L	1	-	-	-	<1	<1	<1	<1	<1
	Chlorodibromomethane	ug/L	3	-	-	-	<3	<3	<3	<3	<3
Chloroethane	ug/L	10	-	-	-	<10	<10	<10	<10	<10	
Chloroform	ug/L	1	-	-	-	<1	<1	<1	<1	<1	
Chloromethane	ug/L	10	-	-	-	<10	<10	<10	<10	<10	
cis-1,2-dichloroethene	ug/L	1	-	-	-	<1	<1	<1	<1	<1	
cis-1,3-dichloropropene	ug/L	1	-	-	-	<1	<1	<1	<1	<1	
cis-1,4-Dichloro-2-butene	ug/L	10	-	-	-	<10	<10	<10	<10	<10	

Notes

MDL - Method Detection Limit

- "Sample not analyzed for this parameter"

< - "result is less than the MDL. No detectable concentration was measured"

* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

		Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1
		Date	02-Nov-13	03-Nov-13	04-Nov-13	05-Nov-13	06-Nov-13	07-Nov-13	08-Nov-13	09-Nov-13	ATR-D1
Method Type	Chemical	Unit	MDL								
	Dibromomethane	µg/L	3	-	-	-	<3	<3	<3	<3	<3
	Dichlorodifluoromethane	µg/L	3	-	-	-	<3	<3	<3	<3	<3
	Dichloromethane	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	Ethanol	µg/L	300	-	-	-	<300	<300	<300	<300	<300
	Ethyl methacrylate	µg/L	10	-	-	-	<10	<10	<10	<10	<10
	Ethylbenzene	mg/L	0.0005	<0.0005	-	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (m & p)	mg/L	0.0005	<0.0005	-	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (o)	mg/L	0.0005	<0.0005	-	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylenes Total	µg/L	0.71	<0.71	-	<0.71	-	-	-	-	-
	Iodomethane	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	Styrene	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	Trichloroethene	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	Tetrachloroethene	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	trans-1,2-dichloroethene	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	trans-1,3-dichloropropene	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	trans-1,4-Dichloro-2-butene	µg/L	10	-	-	-	<10	<10	<10	<10	<10
	Trichlorofluoromethane	µg/L	1	-	-	-	<1	<1	<1	<1	<1
	Vinyl acetate	µg/L	100	-	-	-	<100	<100	<100	<100	<100
	Vinyl chloride	µg/L	2	-	-	-	<2	<2	<2	<2	<2

Notes
MDL - Method Detection Limit
- "Sample not analyzed for this parameter"
< - "result is less than the MDL. No detectable concentration was measured"
* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

	Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	
		Date	10-Nov-13	11-Nov-13	12-Nov-13	13-Nov-13	14-Nov-13	15-Nov-13	16-Nov-13	17-Nov-13	
Method Type	Chemical	Unit	MDL								
Aggregate Organics	Hydrocarbons, Recoverable (I.R.)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	
	BOD	mg/L	2	<2	<2	2.1	<2	<2	2	<2	
	Oil and Grease	mg/L	1	-	-	-	-	-	-	-	
	Phenols (4AAP)	µg/L	1	<1	1.4	1.4	2	2.9	1.4	1.2	<1
Anions and Nutrients	Alkalinity (T) as CaCO3	mg/L	2	127	134	132	131	129	123	128	134
	Ammonia	mg/L	0.05	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Bicarbonate	mg/L	5	156	163	161	159	158	151	156	163
	Carbonate	mg/L	5	<5	<5	<5	<5	<5	<5	<5	<5
	Chloride	mg/L	0.5	4.08	4.62	4.4	4.5	3.45	3.37	3.26	3.32
	Electrical Conductivity (lab)	µS/m	0.0002	0.408	0.418	0.416	0.414	0.401	0.411	0.399	0.418
	Hydroxide	mg/L	5	<5	<5	<5	<5	<5	<5	<5	<5
	Ionic Balance	%		93.1	92.2	93.1	103	94	86.6	95.3	90.7
	Kjeldahl Nitrogen Total	mg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Nitrate (as N)	mg/L	0.05	0.072	0.119	0.072	0.084	0.07	0.064	0.06	0.071
	Nitrate + Nitrite-N	mg/L	0.07	0.072	0.119	0.072	0.084	<0.071	<0.071	<0.071	0.071
	Nitrite (as N)	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	pH (Lab)	pH	0.1	7.98	7.99	8.1	8.07	7.96	7.92	7.93	7.93
	Phosphorus	mg/L	0.001	0.0099	0.0116	0.0121	0.0101	0.0168	0.0138	0.0172	0.019
	Phosphorus (Filtered)	mg/L	0.001	0.0015	<0.001	0.002	0.0028	0.0026	0.0018	0.0023	0.0014
	Sulphate	mg/L	0.5	81.1	82.7	80.4	79.2	77.4	80.2	73.6	74.8
	Sulphide	mg/L	0.002	0.0026	<0.002	0.0032	<0.002	0.0032	<0.002	<0.002	<0.002
	Hardness as CaCO3	mg/L		182	188	184	202	183	167	180	174
	TDS	mg/L		235	243	239	244	231	224	226	229
Cyanides	Cyanide Total	mg/L	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals	Aluminium (Filtered)	mg/L	0.001	0.009	0.0095	0.0099	0.011	0.0116	0.0084	<0.0086	0.0096
	Antimony (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Arsenic (Filtered)	mg/L	0.0001	0.00013	0.00012	0.00016	0.00011	0.00015	0.00067	<0.00017	0.00012
	Barium (Filtered)	mg/L	0.00005	0.06	0.0568	0.0559	0.0603	0.0589	0.0506	0.0653	0.057
	Beryllium (Filtered)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Bismuth (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext) (Filtered)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Cadmium (Filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Calcium (Filtered)	mg/L	0.02	48.7	49.7	49.4	49.5	47.9	45.4	49.2	44.6
	Chromium (III+VI) (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Cobalt (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Copper (Filtered)	mg/L	0.0001	0.00016	0.00012	0.00013	0.00012	0.00014	0.00019	<0.00013	0.00015
	Iron (Filtered)	mg/L	0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
	Lead (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Lithium (Filtered)	mg/L	0.003	<0.003	0.0032	0.0033	0.0031	0.0033	0.003	0.0033	<0.003
	Magnesium (Filtered)	mg/L	0.005	14.7	15.4	14.8	15.5	15.3	13	13.8	15.2
	Manganese (Filtered)	mg/L	0.00005	0.0115	0.0107	0.0125	0.00787	0.00799	0.00432	0.008	0.0073
	Molybdenum (Filtered)	mg/L	0.00005	0.000971	0.000928	0.000982	0.00103	0.000987	0.000857	0.000904	0.000856
	Nickel (Filtered)	mg/L	0.0001	0.00025	0.00028	0.00031	0.0003	0.00029	0.00026	0.0003	0.00027
	Phosphorus (Filtered)	mg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium (Filtered)	mg/L	0.05	0.722	0.691	0.708	0.684	0.697	0.58	0.74	0.763
	Selenium (Filtered)	mg/L	0.0001	0.00035	0.00032	0.00032	0.00033	0.00032	0.00034	<0.00031	0.00029
	Silicon (Filtered)	µg/L	50	1810	1750	1850	1700	1810	1750	1970	1720
	Silver (Filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium (Filtered)	mg/L	0.05	9.26	9.45	10	10.1	8.7	7.5	8.7	9.89
	Strontium (Filtered)	mg/L	0.0001	0.565	0.548	0.533	0.56	0.526	0.512	0.524	0.49
	Thallium (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Titanium (Filtered)	mg/L	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
	Uranium (Filtered)	µg/L	0.01	0.607	0.639	0.604	0.571	0.634	0.572	0.616	0.62
	Vanadium (Filtered)	mg/L	0.0001	<0.0001	<0.0001	0.00012	0.00011	0.00012	<0.0001	0.00013	0.00011
Zinc (Filtered)	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Field	Turbidity	NTU		-	-	-	-	-	-	-	-
Organic / Inorganic Carbon	Carbon	mg/L	1	2.1	2.1	2.2	2.4	2.1	2.5	3.5	2.8
	Dissolved Organic Carbon (Filtered)	mg/L	1	2.1	2.3	2.5	2.7	2.4	2.5	2.3	2.9
Organic Parameters	Acrylamide	µg/L	5	-	-	-	-	-	-	-	-
	Naphthenic Acid	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1

Notes
MDL - Method Detection Limit
- "Sample not analyzed for this parameter"
< - "result is less than the MDL. No detectable concentration was measured"
* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

Method Type	Chemical	Unit	MDL	Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1
				Date	10-Nov-13	11-Nov-13	12-Nov-13	13-Nov-13	14-Nov-13	15-Nov-13	16-Nov-13	17-Nov-13
Physical Tests	Dissolved Oxygen (Filtered)	mg/L	0.5	-	-	-	-	-	-	-	-	-
	TDS (Filtered)	mg/L	10	246	251	254	240	245	240	239	260	
	Total Suspended Solids	mg/L	3	6	<3	<3	<3	6	8	8	8	
	Turbidity	NTU	0.1	4.61	2.88	3.86	3.58	7.24	8.67	11.3	6.82	
Polycyclic Aromatic Hydrocarbons	Benzo[+]fluoranthene	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	C4 Benzantracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	1,1-Biphenyl	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	1-Methylnaphthalene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	2-methylnaphthalene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Acenaphthene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Acenaphthylene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Anthracene	ug/L	0.01	<0.04	<0.04	<0.04	<0.04	<0.041	<0.04	<0.04	<0.04	<0.04
	Benz(a)anthracene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(a) pyrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Acridine	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Benzo(e)pyrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(g,h,i)perylene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(k)fluoranthene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	C1 Acenaphthenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	Chrysene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	C1 Biphenyls	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	-	-	-	-	-	-	-
	C1 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	-	-	-	-	-	-	-
	Dibenz(a,h)anthracene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Dibenzothiophene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Fluoranthene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Fluorene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Indeno(1,2,3-c,d)pyrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Naphthalene	ug/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Perylene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Phenanthrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Pyrene	ug/L	0.01	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	Quinoline	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Retene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	C2 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Biphenyls	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Benzantracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
C3 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
C3 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Total Metals	Aluminium	mg/L	0.003	0.106	0.114	0.114	0.0648	0.13	0.114	0.2	0.167	
	Antimony	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
	Arsenic	mg/L	0.0001	0.00015	0.00018	0.00021	0.00077	0.00087	0.00019	0.00024	0.00024	
	Barium	mg/L	0.00005	0.0594	0.0644	0.0624	0.0609	0.0627	0.0619	0.0779	0.0636	
	Beryllium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

Notes

MDL - Method Detection Limit

- "Sample not analyzed for this parameter"

< - "result is less than the MDL. No detectable concentration was measured"

* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

		Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1
		Date	10-Nov-13	11-Nov-13	12-Nov-13	13-Nov-13	14-Nov-13	15-Nov-13	16-Nov-13	17-Nov-13	ATR-D1
Method Type	Chemical	Unit	MDL								
	Bismuth	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext)	mg/L	0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Cadmium	mg/L	0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Calcium	mg/L	0.02	49.5	51.6	54.6	50.5	50.3	51.5	49.9	49.4
	Chromium (III+VI)	mg/L	0.0001	0.00027	0.00019	0.0002	0.00015	0.00025	0.00021	0.0003	0.00027
	Cobalt	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00014	0.00013	0.00015	0.00012
	Copper	mg/L	0.0001	0.00044	0.00029	0.00032	0.00025	0.00043	0.00037	0.00121	0.00059
	Iron	mg/L	0.01	0.128	0.112	0.127	0.093	0.235	0.184	0.234	0.211
	Lead	mg/L	0.00005	0.000125	0.000113	0.000104	0.000093	0.000189	0.000169	0.000195	0.000172
	Lithium	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	Magnesium	mg/L	0.005	14.6	16	15.7	14.4	14.4	15.2	16.3	17
	Manganese	mg/L	0.00005	0.0141	0.0137	0.0159	0.012	0.0176	0.0132	0.0154	0.015
	Mercury	ug/L	0.0005	0.0006	0.00052	<0.0005	<0.0005	0.0005	0.00087	0.00088	<0.001
	Molybdenum	mg/L	0.00005	0.00105	0.00107	0.00111	0.000947	0.000992	0.00105	0.000911	0.000929
	Nickel	mg/L	0.0001	0.00044	0.00036	0.00041	0.00032	0.0005	0.00044	0.00062	0.00049
	Phosphorus	mg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium	mg/L	0.05	0.715	0.787	0.755	0.724	0.696	0.743	0.917	0.868
	Selenium	mg/L	0.0001	0.00031	0.00033	0.00031	0.0003	0.00035	0.00033	0.0003	0.00033
	Silicon	ug/L	50	1840	1880	2000	1700	1790	2000	2550	2240
	Silver	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium	mg/L	0.05	9.22	10.9	10.5	10.6	9.04	8.64	9.49	10.5
	Strontium	mg/L	0.0001	0.576	0.584	0.577	0.519	0.572	0.592	0.521	0.519
	Thallium	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Titanium	mg/L	0.0003	0.00274	0.00464	0.00189	0.00071	0.00172	0.00154	0.00347	0.00283
	Uranium	ug/L	0.01	0.612	0.628	0.669	0.587	0.581	0.646	0.663	0.679
	Vanadium	mg/L	0.0001	0.00039	0.00031	0.00048	0.00026	0.00044	0.00042	0.00057	0.00049
	Zinc	mg/L	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Volatile Organic Compounds	1,1,1-trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	1,1,2,2-tetrachloroethane	ug/L	20	<20	<20	<20	<20	<20	<20	<20	<20
	1,1,2-trichloroethane	ug/L	2	<2	<2	<2	<2	<2	<2	<2	<2
	1,1-dichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	1,1-dichloroethene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	1,2,3-trichloropropane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5
	1,2-dibromoethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	1,2-dichlorobenzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	1,2-dichloroethane	ug/L	2	<2	<2	<2	<2	<2	<2	<2	<2
	1,2-dichloropropane	ug/L	2	<2	<2	<2	<2	<2	<2	<2	<2
	1,3-dichlorobenzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	1,4-dichlorobenzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Methyl Ethyl Ketone	ug/L	100	<100	<100	<100	<100	<100	<100	<100	<100
	2-hexanone (MBK)	ug/L	10	<10	<10	<10	<10	<10	<10	<10	<10
	4-Methyl-2-pentanone	ug/L	10	<10	<10	<10	<10	<10	<10	<10	<10
	Acetone	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Acrolein	ug/L	100	<100	<100	<100	<100	<100	<100	<100	<100
	Acrylonitrile	ug/L	100	<100	<100	<100	<100	<100	<100	<100	<100
	Benzene	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Toluene	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Bromodichloromethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Bromoform	ug/L	3	<3	<3	<3	<3	<3	<3	<3	<3
	Bromomethane	ug/L	10	<10	<10	<10	<10	<10	<10	<10	<10
	Carbon disulfide	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Carbon tetrachloride	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Chlorobenzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Chlorodibromomethane	ug/L	3	<3	<3	<3	<3	<3	<3	<3	<3
	Chloroethane	ug/L	10	<10	<10	<10	<10	<10	<10	<10	<10
	Chloroform	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Chloromethane	ug/L	10	<10	<10	<10	<10	<10	<10	<10	<10
	cis-1,2-dichloroethene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	cis-1,3-dichloropropene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	cis-1,4-Dichloro-2-butene	ug/L	10	<10	<10	<10	<10	<10	<10	<10	<10

Notes

MDL - Method Detection Limit

- "Sample not analyzed for this parameter"

< - "result is less than the MDL. No detectable concentration was measured"

* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

		Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1	ATR-D1
		Date	10-Nov-13	11-Nov-13	12-Nov-13	13-Nov-13	14-Nov-13	15-Nov-13	16-Nov-13	17-Nov-13	ATR-D1
Method Type	Chemical	Unit	MDL								
	Dibromomethane	µg/L	3	<3	<3	<3	<3	<3	<3	<3	<3
	Dichlorodifluoromethane	µg/L	3	<3	<3	<3	<3	<3	<3	<3	<3
	Dichloromethane	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Ethanol	µg/L	300	<300	<300	<300	<300	<300	<300	<300	<300
	Ethyl methacrylate	µg/L	10	<10	<10	<10	<10	<10	<10	<10	<10
	Ethylbenzene	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (m & p)	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (o)	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylenes Total	µg/L	0.71	-	-	-	-	-	-	-	-
	Iodomethane	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Styrene	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Trichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Tetrachloroethene	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	trans-1,2-dichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	trans-1,3-dichloropropene	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	trans-1,4-Dichloro-2-butene	µg/L	10	<10	<10	<10	<10	<10	<10	<10	<10
	Trichlorofluoromethane	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1
	Vinyl acetate	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100
	Vinyl chloride	µg/L	2	<2	<2	<2	<2	<2	<2	<2	<2

Notes
MDL - Method Detection Limit
- "Sample not analyzed for this parameter"
< - "result is less than the MDL. No detectable concentration was measured"
* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

		Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1	
		Date	22-Nov-13	24-Nov-13	25-Nov-13	26-Nov-13	
Method Type	Chemical	Unit	MDL				
Aggregate Organics	Hydrocarbons, Recoverable (I.R.)	mg/L	1	<1	<1	<1	
	BOD	mg/L	2	<2	<2	<2	
	Oil and Grease	mg/L	1	-	-	-	
	Phenols (4AAP)	µg/L	1	3.7	<1	1.2 - 1.3	<1 - 1.1
Anions and Nutrients	Alkalinity (T) as CaCO3	mg/L	2	152	158	142 - 144	134 - 143
	Ammonia	mg/L	0.05	0.079	0.051	0.059	<0.05
	Bicarbonate	mg/L	5	186	193	174 - 175	164 - 174
	Carbonate	mg/L	5	<5	<5	<5	<5
	Chloride	mg/L	0.5	4.9	4.18	3.62 - 3.7	3.68 - 3.81
	Electrical Conductivity (lab)	µS/m	0.0002	0.488	0.47	0.454 - 0.457	0.435 - 0.438
	Hydroxide	mg/L	5	<5	<5	<5	<5
	Ionic Balance	%		101	96.1	97.2 - 97.6	96.8 - 98.9
	Kjeldahl Nitrogen Total	mg/L	0.2	<0.2	0.23	<0.2	<0.2
	Nitrate (as N)	mg/L	0.05	0.068	0.092	0.064 - 0.065	0.077 - 0.085
	Nitrate + Nitrite-N	mg/L	0.07	<0.071	0.092	<0.071	0.077 - 0.085
	Nitrite (as N)	mg/L	0.05	<0.05	<0.05	<0.05	<0.05
	pH (Lab)	pH	0.1	7.99	8.06	8.03 - 8.1	7.92 - 7.97
	Phosphorus	mg/L	0.001	0.0155	0.0227	0.015 - 0.0174	0.0119 - 0.0134
	Phosphorus (Filtered)	mg/L	0.001	0.002	0.0061	0.0015 - 0.0019	0.0017 - 0.002
	Sulphate	mg/L	0.5	96.9	88.9	90 - 91.9	82.6 - 87.8
	Sulphide	mg/L	0.002	0.0043	0.0034	<0.002	<0.002
Hardness as CaCO3	mg/L		230	218	213 - 214	202 - 209	
TDS	mg/L		289	278	266 - 267	253 - 256	
Cyanides	Cyanide Total	mg/L	0.002	<0.005	<0.005	<0.005	<0.005
Dissolved Metals	Aluminium (Filtered)	mg/L	0.001	0.0123	0.0091	0.0091 - 0.0092	0.0078 - 0.0085
	Antimony (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Arsenic (Filtered)	mg/L	0.0001	0.00015	0.00095	0.00015 - 0.00016	0.00016
	Barium (Filtered)	mg/L	0.00005	0.0703	0.0751	0.0687 - 0.069	0.0581 - 0.066
	Beryllium (Filtered)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Bismuth (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext) (Filtered)	mg/L	0.01	0.011	<0.01	<0.01	<0.01
	Cadmium (Filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Calcium (Filtered)	mg/L	0.02	63.2	58.5	57.3 - 58.2	53.8 - 57
	Chromium (III+VI) (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Cobalt (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Copper (Filtered)	mg/L	0.0001	0.00032	0.00023	0.00011 - 0.00033	<0.0001
	Iron (Filtered)	mg/L	0.01	<0.01	0.013	<0.01	<0.01
	Lead (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Lithium (Filtered)	mg/L	0.003	0.0045	0.004	0.0043 - 0.0044	0.004 - 0.0043
	Magnesium (Filtered)	mg/L	0.005	17.5	17.5	16.7 - 16.9	16.2 - 16.4
	Manganese (Filtered)	mg/L	0.00005	0.0103	0.0102	0.00983 - 0.0101	0.00867 - 0.00889
	Molybdenum (Filtered)	mg/L	0.00005	0.00134	0.00118	0.00122 - 0.00124	0.00104 - 0.00105
	Nickel (Filtered)	mg/L	0.0001	0.00034	0.00035	0.00031 - 0.00035	0.0003 - 0.00031
	Phosphorus (Filtered)	mg/L	0.3	<0.3	<0.3	<0.3	<0.3
	Potassium (Filtered)	mg/L	0.05	1	0.96	0.85 - 0.86	0.74 - 0.76
	Selenium (Filtered)	mg/L	0.0001	0.00044	0.00039	0.00039 - 0.0004	0.00036 - 0.00037
	Silicon (Filtered)	µg/L	50	1980	2300	2110 - 2130	2150 - 2340
	Silver (Filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium (Filtered)	mg/L	0.05	14.1	12.6	10.1 - 10.3	9.8 - 9.9
	Strontium (Filtered)	mg/L	0.0001	0.678	0.612	0.655 - 0.667	0.588
	Thallium (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Titanium (Filtered)	mg/L	0.0003	<0.0003	<0.0003	<0.0003	<0.0003
	Uranium (Filtered)	µg/L	0.01	0.758	0.729	0.695 - 0.714	0.703 - 0.704
Vanadium (Filtered)	mg/L	0.0001	0.00015	0.00016	0.00012 - 0.00013	<0.0001	
Zinc (Filtered)	mg/L	0.001	0.001	<0.001	<0.001 - 0.0022	<0.001	
Field	Turbidity	NTU	-	-	-	-	
Organic / Inorganic Carbon	Carbon	mg/L	1	3.3	2.1	2.2 - 5.6	2.3 - 2.7
	Dissolved Organic Carbon (Filtered)	mg/L	1	3.5	2.4	2.1	2.5 - 2.7
Organic Parameters	Acrylamide	µg/L	5	-	-	-	-
	Naphthenic Acid	mg/L	1	<1	<1	<1	<1

Notes
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* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

				Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1
				Date	22-Nov-13	24-Nov-13	25-Nov-13	26-Nov-13
Method Type	Chemical	Unit	MDL					
Physical Tests	Dissolved Oxygen (Filtered)	mg/L	0.5	-	-	-	-	-
	TDS (Filtered)	mg/L	10	302	283	279 - 283	263 - 267	
	Total Suspended Solids	mg/L	3	<3	10	5 - 7	<3 - 4	
	Turbidity	NTU	0.1	3.22	6.7	4.11 - 4.17	3.45 - 4.08	
Polycyclic Aromatic Hydrocarbons	Benzo[+]fluoranthene	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
	C4 Benzenanthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Dibenzo[thiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	1,1-Biphenyl	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	1-Methylnaphthalene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	2-methylnaphthalene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Acenaphthene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Acenaphthylene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Anthracene	ug/L	0.01	<0.04	<0.04	<0.04	<0.04	
	Benz(a)anthracene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Benzo(a) pyrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Acridine	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
	Benzo(e)pyrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Benzo(g,h,i)perylene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Benzo(k)fluoranthene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	C1 Acenaphthenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	Chrysene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	C1 Biphenyls	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Dibenzo[thiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	-	-	
	C1 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	-	-	
	Dibenz(a,h)anthracene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Dibenzothiophene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Fluoranthene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Fluorene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Indeno(1,2,3-c,d)pyrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Naphthalene	ug/L	0.05	<0.05	<0.05	<0.05	<0.05	
	Perylene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Phenanthrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Pyrene	ug/L	0.01	<0.04	<0.04	<0.04	<0.01	
	Quinoline	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	Retene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	
	C2 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Biphenyls	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Dibenzo[thiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C3 Benzenanthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C3 Dibenzo[thiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C3 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
	C3 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	
C3 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04		
C3 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04		
Total Metals	Aluminium	mg/L	0.003	0.0767	0.182	0.106 - 0.164	0.112 - 0.134	
	Antimony	mg/L	0.0001	<0.0001	<0.0001	<0.0001 - 0.0001	<0.0001	
	Arsenic	mg/L	0.0001	0.00021	0.00026	0.00018 - 0.00021	0.00017 - 0.00019	
	Barium	mg/L	0.00005	0.0743	0.0783	0.0648 - 0.0673	0.0635 - 0.0657	
	Beryllium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

Notes

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- "Sample not analyzed for this parameter"

< - "result is less than the MDL. No detectable concentration was measured"

* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

		Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1
		Date	22-Nov-13	24-Nov-13	25-Nov-13	26-Nov-13
Method Type	Chemical	Unit	MDL			
	Bismuth	mg/L	0.00005	<0.00005	<0.00005	<0.00005 - 0.000053
	Boron (hot water ext)	mg/L	0.01	0.011	0.011	<0.01 - 0.01
	Cadmium	mg/L	0.00001	<0.00001	<0.00001	<0.00001
	Calcium	mg/L	0.02	63.5	62.2	54.8 - 61
	Chromium (III+VI)	mg/L	0.0001	0.00018	0.00037	0.00028 - 0.0004
	Cobalt	mg/L	0.0001	<0.0001	0.00016	0.0001 - 0.00013
	Copper	mg/L	0.0001	0.00036	0.00074	0.00059 - 0.00064
	Iron	mg/L	0.01	0.083	0.322	0.153 - 0.201
	Lead	mg/L	0.00005	0.000085	0.000231	0.000143 - 0.000185
	Lithium	mg/L	0.005	<0.005	<0.005	<0.005
	Magnesium	mg/L	0.005	18	17.5	16.9 - 18.3
	Manganese	mg/L	0.00005	0.0129	0.0186	0.0134 - 0.0151
	Mercury	ug/L	0.0005	0.00051	0.00052	0.00053 - 0.0008
	Molybdenum	mg/L	0.00005	0.00141	0.00129	0.00117 - 0.00132
	Nickel	mg/L	0.0001	0.00043	0.00067	0.00051 - 0.00052
	Phosphorus	mg/L	0.3	<0.3	<0.3	<0.3
	Potassium	mg/L	0.05	1.04	1.01	0.81 - 0.892
	Selenium	mg/L	0.0001	0.00044	0.00041	0.00042
	Silicon	ug/L	50	2080	2530	2220 - 2410
	Silver	mg/L	0.00001	<0.00001	<0.00001	<0.00001
	Sodium	mg/L	0.05	14.6	11.6	10.4 - 10.9
	Strontium	mg/L	0.0001	0.7	0.675	0.588 - 0.654
	Thallium	mg/L	0.00005	<0.00005	<0.00005	<0.00005
	Tin	mg/L	0.0001	<0.0001	<0.0001	<0.0001
	Titanium	mg/L	0.0003	0.00103	0.00294	0.00287 - 0.00462
	Uranium	ug/L	0.01	0.759	0.755	0.733 - 0.801
	Vanadium	mg/L	0.0001	0.00034	0.0006	0.00051 - 0.00066
	Zinc	mg/L	0.003	<0.003	<0.003	0.0034 - 0.0053
Volatile Organic Compounds	1,1,1-trichloroethane	ug/L	1	<1	<1	<1
	1,1,2,2-tetrachloroethane	ug/L	20	<20	<20	<20
	1,1,2-trichloroethane	ug/L	2	<2	<2	<2
	1,1-dichloroethane	ug/L	1	<1	<1	<1
	1,1-dichloroethene	ug/L	1	<1	<1	<1
	1,2,3-trichloropropane	ug/L	5	<5	<5	<5
	1,2-dibromoethane	ug/L	1	<1	<1	<1
	1,2-dichlorobenzene	ug/L	1	<1	<1	<1
	1,2-dichloroethane	ug/L	2	<2	<2	<2
	1,2-dichloropropane	ug/L	2	<2	<2	<2
	1,3-dichlorobenzene	ug/L	1	<1	<1	<1
	1,4-dichlorobenzene	ug/L	1	<1	<1	<1
	Methyl Ethyl Ketone	ug/L	100	<100	<100	<100
	2-hexanone (MBK)	ug/L	10	<10	<10	<10
	4-Methyl-2-pentanone	ug/L	10	<10	<10	<10
	Acetone	mg/L	0.1	<0.1	<0.1	<0.1
	Acrolein	ug/L	100	<100	<100	<100
	Acrylonitrile	ug/L	100	<100	<100	<100
	Benzene	mg/L	0.0005	<0.001	<0.001	<0.001
	Toluene	mg/L	0.0005	<0.001	<0.001	<0.001
	Bromodichloromethane	ug/L	1	<1	<1	<1
	Bromoform	ug/L	3	<3	<3	<3
	Bromomethane	ug/L	10	<10	<10	<10
	Carbon disulfide	ug/L	1	<1	<1	<1
	Carbon tetrachloride	ug/L	1	<1	<1	<1
	Chlorobenzene	ug/L	1	<1	<1	<1
	Chlorodibromomethane	ug/L	3	<3	<3	<3
	Chloroethane	ug/L	10	<10	<10	<10
	Chloroform	ug/L	1	<1	<1	<1
	Chloromethane	ug/L	10	<10	<10	<10
	cis-1,2-dichloroethene	ug/L	1	<1	<1	<1
	cis-1,3-dichloropropene	ug/L	1	<1	<1	<1
	cis-1,4-Dichloro-2-butene	ug/L	10	<10	<10	<10

Notes

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* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 8 ATHABASCA RIVER 12.5 KM DOWNSTREAM (ATR-D1)

		Location	ATR-D1	ATR-D1	ATR-D1	ATR-D1
		Date	22-Nov-13	24-Nov-13	25-Nov-13	26-Nov-13
Method Type	Chemical	Unit	MDL			
	Dibromomethane	µg/L	3	<3	<3	<3
	Dichlorodifluoromethane	µg/L	3	<3	<3	<3
	Dichloromethane	µg/L	1	<1	<1	<1
	Ethanol	µg/L	300	<300	<300	<300
	Ethyl methacrylate	µg/L	10	<10	<10	<10
	Ethylbenzene	mg/L	0.0005	<0.001	<0.001	<0.001
	Xylene (m & p)	mg/L	0.0005	<0.001	<0.001	<0.001
	Xylene (o)	mg/L	0.0005	<0.001	<0.001	<0.001
	Xylenes Total	µg/L	0.71	-	-	-
	Iodomethane	µg/L	1	<1	<1	<1
	Styrene	µg/L	1	<1	<1	<1
	Trichloroethene	µg/L	1	<1	<1	<1
	Tetrachloroethene	µg/L	1	<1	<1	<1
	trans-1,2-dichloroethene	µg/L	1	<1	<1	<1
	trans-1,3-dichloropropene	µg/L	1	<1	<1	<1
	trans-1,4-Dichloro-2-butene	µg/L	10	<10	<10	<10
	Trichlorofluoromethane	µg/L	1	<1	<1	<1
	Vinyl acetate	µg/L	100	<100	<100	<100
	Vinyl chloride	µg/L	2	<2	<2	<2

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